

- a) contacting said sample with a probe, wherein said probe comprises nucleic acid complementary to HIV-2 [RNA] nucleic acid, and wherein said nucleic acid is selected from the group consisting of nucleic acid that does not hybridize to nucleotides 5290-9130 of HIV-1 under non-stringent conditions and nucleic acid that does not hybridize to nucleotides 2170-2240 of HIV-1 under non-stringent conditions;
- b) washing the resulting hybrid under non-stringent conditions; and
- c) detecting said hybrid.

Claim 43, line 1, after "said" please insert --probe--.

Claim 44, line 1, after "said" please insert --probe--.

Claim 45, line 1, after "said" please insert --probe--.

Claim 46, line 1, after "said" please insert --probe--.

Claim 47, line 1, after "said" please insert --probe--.

Claim 48, line 1, after "said" please insert --probe--.

Claim 49, line 1, after "said" please insert --probe--.

52. (Twice Amended) A method of producing a hybridization probe for HIV-2 [RNA] retrovirus nucleic acid, said method comprising:

- a) providing a recombinant cloning vector, wherein said vector comprises nucleic acid complementary to HIV-2 [RNA] nucleic acid, and wherein said nucleic acid is selected from the group consisting of nucleic acid that does not hybridize to nucleotides 5290-9130 of HIV-1 under non-stringent conditions and nucleic acid that does not hybridize to nucleotides 2170-2240 of HIV-1 under non-stringent conditions;
- b) cloning said vector in a competent cellular host; and
- c) recovering the DNA-recombinants.

Claim 53, line 1, after "said" please insert --probe--.

Claim 54, line 1, after "said" please insert --probe--.

Claim 55, line 1, after "said" please insert --probe--.

Claim 56, line 1, after "said" please insert --probe--.

Claim 57, line 1, after "said" please insert --probe--.

Claim 58, line 1, after "said" please insert --probe--.

Claim 59, line 1, after "said" please insert --probe--.

62. (Once Amended) A method of detecting HIV-2 retrovirus [RNA] nucleic acid in a biological sample, said method comprising:

a) contacting said sample with a probe, wherein said probe comprises nucleic acid, wherein said nucleic acid is complementary to HIV-2 [RNA] nucleic acid, and wherein said nucleic acid is selected from the group consisting of nucleic acid that does not hybridize to nucleotides 5290-9130 of HIV-1 under non-stringent conditions and nucleic acid that does not hybridize to nucleotides 2170-2240 of HIV-1 under non-stringent conditions;

- b) washing the resulting hybrid under stringent conditions; and
- c) detecting said hybrid.

Claim 63, line 1, after "said" please insert --probe--.

Claim 64, line 1, after "said" please insert --probe--.

Claim 65, line 1, after "said" please insert --probe--.

Claim 66, line 1, after "said" please insert --probe--.

Claim 67, line 1, after "said" please insert --probe--.

Claim 68, line 1, after "said" please insert --probe--.